Gastro-intestinal risk assessment in patients requiring NSAIDs for Osteoarthritis: GIRANO

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Keywords: Osteoarthritis; NSAID

Our study aimed at evaluating the distribution of the lower and upper GI risk profile in patients with OA who are candidates for NSAID treatment or are currently being treated with NSAID treatment in everyday practice. A total of 190 physicians provided data on 885 eligible patients. Sixty-four percent of the patients were female and mean age was 66.1 years, with 45.1% exceeding the age of 70. A history of symptomatic GI ulcer was observed in 18%, complicated GI ulcer in 3% and dyspepsia in 51% of the patients. With regard to medication use, 71% of these patients were already on NSAIDs and more than half used it for ≥ 30 days. In this population 17% were on SSRI, 31% on low dose aspirin and nearly 44% used PPI. Remarkably, 21% of patients used OTC medication for their OA as well.
Conclusion.– Current or candidate users of NSAIDs for OA are more than expected at high GI risk, and a careful assessment of the patient's GI risk profile should be made before prescribing NSAIDs. Prescribers should tailor the type of NSAID they prescribe to the individual risk profile of the patient.

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Body schema building during childhood and adolescence

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Keywords: Body schema; Internal representations; Anticipation; Multisensory Integration; Childhood and Adolescence

In order to perceive and act in its environment, the individual's body and its interactions with the sensory and social environment are represented in the brain. This internal representation of the moving body segments is labelled the body schema. Throughout life, body schema develops based on the sensory information used by the moving body and by its interactions with the environment including other people. Internal representations including body schema and representations of the outside world develop with learning and actions throughout ontogenesis and are constantly updated based on different sensory inputs. The aim of this review is to present some concepts and experimental data about body schema, internal representations and updating process during childhood and adolescence, as obtained using a neurosensory approach. From our developmental studies, it was possible to explore the slow maturation of the sensori-motor representation by examining the anticipatory control. By manipulating proprioceptive and visual information, which are at the heart of the construction of body schema, we wished to highlight notable differences between adolescents and young adults on both a postural and perceptual level, which confirms the late maturation of multisensory integration for central motor control.

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Time-course of stance stabilization in response to visual or haptic inflow

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for the brain to process the sensory inflow. Latency and time-course of changes in postural control mode have now been measured following sudden addition or withdrawal of visual or haptic information. The activity of postural muscles and body sway adaptively decrease in response to the stabilizing information within a time-interval from sensory shift to decrease in EMG and body sway ranging from 0.5 to 1.5 in normal subjects. On removal of haptic or visual information, latencies of EMG and postural changes are even shorter, however longer than simple reaction-time responses. The finite amount of time from visual or haptic shift to stabilization suggests a time-consuming central integration process. The capacity of modifying balance control at relatively short intervals speaks in favour of a necessary coupling between vision, postural reference, and postural muscle activity, and of the swiftness of this sensory reweighing process. Blind are more rapid than sighted subjects in implementing the adaptive postural modifications when granted the haptic reference, possibly owing to cortical plasticity. These new findings may be relevant in the interpretation of sensorimotor integration problems and in the design of models of human balance.

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Changes in postural control in hemiplegic patients after stroke performing a dual task

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Objective.– To determine the effects of an attentional task on hemiplegic patients' postural control performances.
Methods.– Retrospective study. Twenty-three hemiplegic patients and 23 healthy age- and sex-matched control subjects. The main outcome measure was the sway area and sway path of the center of pressure were measured during 30 seconds in standing subjects and patients under 3 conditions: eyes open (EO), EO while performing a simple arithmetic task (EO-AT), and eyes closed (EC).
Results.– In the hemiplegic patients, the body sway area increased significantly with EC ($P < .001$) and during the EO-AT task ($P < .017$) in comparison with EO. Sway area with EO-AT remained, however, significantly smaller than with EC ($P < .014$). In the healthy subjects, the body sway did not differ significantly between the EO-AT and EO tasks ($P < .42$). The increase observed in the sway area and path in the hemiplegic population during the EO-AT task correlated significantly with age.
Conclusion.– The postural performances of hemiplegic patients decreased during both the arithmetic task and the EC task. The cognitive task had no effect on healthy subjects' postural performances. This study is the first to show the combined effects of age and dual task on the postural performances of hemiplegic subjects.

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Variability of human gait: Long-range autocorrelations and fluctuation magnitude of stride duration

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Human locomotion is a rhythmic process whose variability can be investigated in two different ways. The magnitude of the stride duration fluctuation can be addressed by classical mathematical methods (coefficients of variation) and are usually computed on about ten cycles. Fluctuation dynamics between strides can be characterized using the autocorrelation function computed by combining analysis of the Hurst exponent and of power spectral density over a large number